

91

# Classification of Clastic Sediments

**Table 6-1 Classification of Clastic Sediments**

Particle Size	Sediment		Rock
> 256 mm	Gravel	Boulder	Conglomerate
256–64 mm		Cobble	
64–2 mm		Pebble	
2–0.062 mm	Sand		Sandstone
0.062–0.0039 mm	Silt		Siltstone
<0.0039 mm	Clay		Mudstone or shale

# Classification of Clastic Sediments

1. How are clastic sediments classified?

\_\_\_\_\_

2. What type of clastic sediment has the largest particle size?

\_\_\_\_\_

3. What type of clastic sediment has the smallest particle size?

\_\_\_\_\_

4. What size particles are classified as sand?

\_\_\_\_\_

5. What rock type is made up of cobbles?

\_\_\_\_\_

6. How would you classify a clastic sediment particle that is 0.0020 mm in size?

\_\_\_\_\_

7. You find a rock that consists mostly of clastic sediments of about 0.05 mm in size.  
What type of rock is it likely to be?

\_\_\_\_\_

8. Why do clastic sediment particles usually have worn surfaces and rounded corners?

\_\_\_\_\_

9. What process produces clastic sediments?

\_\_\_\_\_

# Classification of Sedimentary Rocks

**Table 6-2 Classification of Sedimentary Rocks**

Rock Type	Rock Name	Method of Formation
<b>Clastic</b>		
Coarse grained	Conglomerate or breccia	Lithification of clastic sediments
Medium grained	Sandstone	
Fine grained	Shale	
<b>Organic</b>		
Calcium carbonate—shells	Limestone	Accumulation and lithification of remains of living things
plant matter	Coal	
<b>Chemical</b>		
Calicite	Evaporite	Precipitation of dissolved minerals from water
Halite		
Gypsum		

# Classification of Sedimentary Rocks

1. Name the three types of sedimentary rocks.

\_\_\_\_\_

2. What is the most common sedimentary rock, and what is its method of formation?

\_\_\_\_\_  
\_\_\_\_\_

3. How are clastic sedimentary rocks classified?

\_\_\_\_\_

4. Compare and contrast conglomerate with breccia.

\_\_\_\_\_  
\_\_\_\_\_

5. How do chemical sedimentary rocks form?

\_\_\_\_\_  
\_\_\_\_\_

6. Name three common evaporite minerals.

\_\_\_\_\_

7. How do organic sedimentary rocks form?

\_\_\_\_\_  
\_\_\_\_\_

8. Name two organic sedimentary rocks.

\_\_\_\_\_



## CHAPTER

## 6

## STUDY GUIDE FOR CONTENT MASTERY

# Sedimentary and Metamorphic Rocks

## SECTION 6.1 Formation of Sedimentary Rocks

*In your textbook, read about the processes that form sedimentary rocks.*  
Use each of the terms below to complete the following statements.

cementation

chemical weathering

clastic sediments

deposition

lithification

physical weathering

sedimentary rock

sorted deposits

sediment

unsorted deposits

- \_\_\_\_\_ consists of solid material that has been deposited on Earth's surface by wind, water, ice, gravity, or chemical precipitation.
- Glaciers and landslides tend to create \_\_\_\_\_ in which sediments of different sizes are mixed together.
- During \_\_\_\_\_, the minerals in a rock are dissolved or otherwise chemically changed.
- The process by which mineral growth binds sediment grains together into solid rock is \_\_\_\_\_.
- Weathering produces \_\_\_\_\_, which are rock and mineral fragments.
- When sediments become cemented together, they form \_\_\_\_\_.
- As a result of \_\_\_\_\_, sediments are laid down on the ground or on the bottom of bodies of water.
- The physical and chemical process called \_\_\_\_\_ transforms sediments into sedimentary rocks.
- During \_\_\_\_\_, minerals remain chemically unchanged, and rock fragments simply break off of the solid rock along fractures or grain boundaries.
- Sediments tend to form \_\_\_\_\_ when transported by water and wind.

SECTION 6.2

Types of Sedimentary Rocks

In your textbook, read about the about different types of sedimentary rocks.  
Complete the table by filling in the type of sedimentary rock described: *clastic*, *organic*, or *chemical*.

Description	Type of Sedimentary Rock
1. Breccias and conglomerates are examples.	
2. Classified by particle size	
3. Coal is an example.	
4. Formed from the remains of once-living things	
5. Formed from deposits of loose sediments	
6. Often contains calcite, halite, or gypsum	
7. Forms evaporites	
8. Sandstone is a medium-grained example.	
9. Formed from precipitation and growth of mineral crystals	
10. Formed from the shells of sea organisms	

In your textbook, read about how sedimentary rocks form and their importance to humans.  
Answer the following questions.

11. How does fossil-containing limestone form?
- 
12. What is coal composed of, and how do humans use it?
- 
13. What information can fossils provide?
- 
14. What do some of the features of sedimentary rocks indicate about ancient bodies of water?
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